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DOCKET NO.: NNI-002

PATENT



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Mark Edward Riehl and Stanford W.

Miller

Confirmation No.: 9758

Application No.: 10/657,296

Group Art Unit: 3764

Filing Date: September 8, 2003

Examiner: Not Yet Assigned

For: REDUCING DISCOMFORT CAUSED BY ELECTRICAL STIMULATION

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TYPED NAME: Vincent J. Roccia  
REGISTRATION NO.: 43,887

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 CFR § 1.56 and in accordance with 37 CFR §§ 1.97-1.98, information relating to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 CFR § 1.56(b).

☒ In accordance with § 1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified

application, within three months of the date of entry into the national stage of the above identified application as set forth in § 1.491, before the mailing date of a first Office Action on the merits of the above-identified application, or before the mailing date of a first Office Action after the filing of request for continued examination under § 1.114, no additional fee is required.

- ☐ In accordance with § 1.97(c), this Information Disclosure Statement is being filed after the period set forth in § 1.97(b) above but before the mailing date of either a Final Action under § 1.116 or a Notice of Allowance under § 1.311, or before an action that otherwise closes prosecution in the application, therefore:

- ☐ Certification in Accordance with § 1.97(e) is attached; or
- ☐ The fee of **\$180.00** as set forth in § 1.17(p) is attached.

- ☐ In accordance with § 1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under § 1.113 or a Notice of Allowance under § 1.311 but before, or simultaneously with, the payment of the Issue Fee, therefore included are: Certification in Accordance with § 1.97(e); and the submission fee of **\$180.00** as set forth in § 1.17(p).

- ☒ Copies of reference numbers **1 thru 22, 33 thru 37, 48 thru 52, 63 thru 67, 78 thru 82, 93, 94** listed on the attached Form PTO-1449 are enclosed herewith.

- ☒ Copies of reference numbers **23 thru 32, 38 thru 47, 53 thru 62, 68 thru 77, 83 thru 92, 95 thru 100** on the attached Form PTO 1449 are not required to be submitted pursuant to 37 CFR § 1.98(a)(2)(i).

- ☐ Copies of references - are not being submitted because they were previously cited by or submitted to the U.S. Patent and

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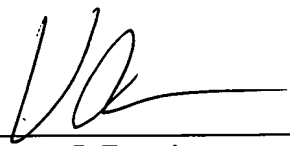
Trademark Office in patent application number \_\_\_\_\_, filed \_\_\_\_\_ for  
which a claim for priority under 35 U.S.C. § 120 has been made in the  
instant application.

There are no listed references which are not in the English language.

Please charge any deficiency or credit any overpayment to Deposit Account No. 23-  
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Date:

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\_\_\_\_\_  
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<b>Form PTO-1449 Modified</b>  List of Patent and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce Patent and Trademark Office		Docket No. <b>NNI-0002</b>	Application No. <b>10/657,296</b>
		Applicant <b>Mark Edward Riehl and Stanford W. Miller</b>	
		Filing Date <b>September 8, 2003</b>	Group <b>3764</b>
		Confirmation No. <b>9758</b>	
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>			
	<b>1</b>	Baudewig, J. et al., "Functional MRI of Cortical Activations Induced by Transcranial Magnetic Stimulation(TMS)", <i>Brain Imaging-NeuroReport</i> , <b>2001</b> , 12(16), 3543-3548	
	<b>2</b>	Bohning, D.E. et al., "A TMS Coil Positioning/Holding System for MR Image-Guided TMS Interleaved with fMRI", <i>Clinical Neurophysiology</i> , <b>2003</b> , 114, 2210-2219	
	<b>3</b>	Bohning, D.E. Ph.D. et al., "A Combined TMS/fMRI Study of Intensity-Dependant TMS over Motor Cortex", <i>Society of Biological Psychiatry</i> , <b>1999</b> , 45, 385-394	
	<b>4</b>	Bohning, D.E. Ph.D. et al., "BOLD-fMRI Response to Single-Pulse Transcranial Magnetic Stimulation (TMS)", <i>Journal of Magnetic Resonance Imaging</i> , <b>2000</b> , 11, 569-574	
	<b>5</b>	Garcia-Toro, M. et al., "Modest Adjunctive Benefit with Transcranial Magnetic Stimulation in Medication-Resistant Depression", <i>Journal of Affective Disorders</i> , <b>2001</b> , 64, 271-275	
	<b>6</b>	George, M.S. et al., "A Controlled Trial of Daily Left Prefrontal Cortex TMS for Treating Depression", <i>Society of Biological Psychiatry</i> , <b>2000</b> , 48, 962-970	
	<b>7</b>	George, M.S. "New Methods of Minimally Invasive Brain Modulation as Therapies in Psychiatry: TMS,MST,VNS and DBS", <i>Chinese Medical Journal (Taipei)</i> , <b>2002</b> , 65, 349-360	
	<b>8</b>	Grafman, J. Ph.D., "TMS as a Primary Brain Mapping Tool" <i>Transcranial Magnetic Stimulation in Neuropsychiatry</i> , <b>2000</b> , 115-140	
	<b>9</b>	Nahas, Z.et al., "Left Prefrontal Transcranial Magnetic Stimulation(TMS) Treatment of Depression in Bipolar Affective Disorder: A Pilot Study of Acute Safety and Efficacy", <i>Bipolar Disorders</i> , <b>2003</b> , 5, 40-47	
	<b>10</b>	Lisanby, S.H. MD. et al., "Magnetic Seizure Therapy of Major Depression", <i>Arch Gen Psychiatry</i> , <b>2001</b> , 58, 303-307	
	<b>11</b>	Lisanby, S.H. et al., "Sham TMS: Intracerebral Measurement of the Induced Electrical Field and the Induction of Motor-Evoked Potentials", <i>Society of Biological Psychiatry</i> , <b>2001</b> , 49, 460-463	
<b>EXAMINER</b>		<b>DATE CONSIDERED</b>	

<b>Form PTO-1449 Modified</b>  List of Patent and Publications Cited by Applicant (Use several sheets if necessary)  U.S. Department of Commerce Patent and Trademark Office	Docket No. <b>NNI-0002</b>	Application No. <b>10/657,296</b>
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<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>		
12	Lisanby, S.H., "Safety and Feasibility of Magnetic Seizure Therapy(MST) in Major Depression: Randomized Within-Subject Comparasion with Electroconvulsive Therapy", <i>Neuropsychopharmacology</i> , <i>New York State Psychiatric Institute</i> , <b>2003</b> , 28, 1852-1865	
13	Lisanby, S.H., "Update on Magnetic Seizure Therapy: A Novel Form of Convulsive Therapy", <i>The Journal of ECT</i> , <b>2002</b> , 18, 182-188	
14	Lorberbaum, J.P., M.D. et al., "Safety Concerns of TMS", <i>Transcranial Magnetic Stimulation in Neuropsychiatry</i> , <b>2000</b> , 141-161	
15	Loo, C.K. et al., "Transcranial Magnetic Stimulation (TMS) in Controlled Treatment Studies: Are Some "Sham" Forms Active?", <i>Society of Biological Psychiatry</i> , <b>2000</b> , 47, 325-331	
16	Nahas, Z. et al., "Unilateral Left Prefrontal Transcranial Magnetic Stimulation(TMS) Produces Intensity-Dependent Bilateral Effects as Measured by Interleaved BOLD fMRI", <i>Society of Biological Psychiatry</i> , <b>2001</b> , 50, 712-720	
17	Pridmore, S., "Substitution of Rapid Transcranial Magnetic Stimulation Treatments for Electroconvulsive Therapy Treatments in a Course of Electroconvulsive Therapy", <i>depression and Anxiety</i> , <b>2000</b> , 12, 118-123	
18	Roth, Y. et al., "A Coil Design for Transcranial Magnetic Stimulation of Deep Brain Regions", <i>Journal of Clinical Neurophysiology</i> , <b>2002</b> , 19(4), 361-370	
19	Ruohonen, J., "Electroencephalography Combined with TMS", BioMag Laboratory, Helsinki University Central Hospital, <a href="http://www.biomag.helsinki.fi/tms/TMSEEG.html">http://www.biomag.helsinki.fi/tms/TMSEEG.html</a> , <b>October 6, 1999</b> , 22 pages	
20	Terrace, H.S. et al., "The Cognitive Effects of Electroconvulsive Shock and Magnetic Seizure Therapy in Rhesus Monkeys", <i>Society for Neuroscience Abstract Viewer and Itinerary Planner</i> , <b>2002</b> , <b>ABSTRACT ONLY # 184.14</b>	
21	Terrace, H.S. et al., "The Cognitive Effects of Electroconvulsive Shock Stimulation and Magnetic Seizure Therapy in Rhesus Monkeys", <i>Society for Neuroscience Abstracts</i> , <b>2001</b> , 27(1), 536.7, pg1418	
22	Trivedi, M.H., MD., "Treatment-Resistant Depression: New Therapies on the Horizon", <i>Annals of Clinical Psychiatry</i> , <b>2003</b> , 15(1), 59-70	
<b>EXAMINER</b>		<b>DATE CONSIDERED</b>

**Form PTO-1449 Modified**

List of Patent and Publications  
Cited by Applicant  
(Use several sheets if necessary)

U.S. Department of Commerce  
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**U. S. PATENT DOCUMENTS**

Examiner Initial		Document No.	Date	Name	Class	Subclass
	23	6,402,678 B1	06/11/02	Fischell, et al.	600	13
	24	5,116,304	05/26/92	Cadwell	600	13
	25	4,994,015	02/19/91	Cadwell	600	13
	26	6,179,771 B1	01/30/01	Mueller	600	13
	27	6,179,769 B1	01/30/01	Ishikawa, et al.	600	9
	28	2001/0031906 A1	10/18/01	Ishikawa, et al.	600	13
	29	2002/0087201 A1	07/04/02	Firlik, et al.	607	45
	30	2002/0103515 A1	08/01/02	Davey, et al.	607	66
	31	5,078,674	01/07/92	Cadwell	600	13
	32	2003/0130706 A1	07/10/03	Sheffield, et al.	607	46

**FOREIGN PATENT DOCUMENTS**

Examiner Initial		Document No.	Date	Country	Translation	
					YES	NO
/	33	WO 02/032504 A2	04/25/02	PCT		
/	34	WO 02/094997 A2	11/28/02	PCT		
✓	35	WO 02/085449 A2	10/31/02	PCT		
✓	36	WO 02/09811 A1	02/07/02	PCT		
✓	37	EP 1 273 320 A1	01/08/03	EPO		

**EXAMINER****DATE CONSIDERED**

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Examiner Initial		Document No.	Date	Name	Class	Subclass
	<b>38</b>	2002/0091419 A1	07/11/02	Firlik, et al.	607	45
	<b>39</b>	2003/0004392 A1	01/02/03	Tanner, et al.	600	9
	<b>40</b>	2003/0023159 A1	01/30/03	Tanner	600	417
	<b>41</b>	2003/0028072 A1	02/06/03	Fischell, et al.	600	13
	<b>42</b>	2003/0088274 A1	05/08/03	Gliner, et al.	607	3
	<b>43</b>	2003/0097161 A1	05/22/03	Firlik, et al.	607	72
	<b>44</b>	6,198,958 B1	03/06/01	Ives, et al.	600	411
	<b>45</b>	2003/0195588 A1	10/16/03	Fischell, et al.	670	55
	<b>46</b>	2003/0204135 A1	10/30/03	Bystritsky	600	407
	<b>47</b>	6,663,556 B2	12/16/03	Barker	600	14

**FOREIGN PATENT DOCUMENTS**

Examiner Initial		Document No.	Date	Country	Translation	
					YES	NO
/	<b>48</b>	WO 02/089902 A2	11/14/02	PCT		
/	<b>49</b>	WO 03/035163 A2	05/01/03	PCT		
/	<b>50</b>	WO 01/97906 A2	12/27/01	PCT		
/	<b>51</b>	WO 99/64884	12/16/99	PCT		
/	<b>52</b>	WO 02/085454 A1	10/31/02	PCT		

**EXAMINER****DATE CONSIDERED**

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Examiner Initial		Document No.	Date	Name	Class	Subclass
	<b>53</b>	2004/0010177 A1	01/15/04	Rohan, et al.	600	9
	<b>54</b>	6,503,187 B1	01/07/03	Ilmoniemi, et al.	600	14
	<b>55</b>	6,484,059 B2	11/19/02	Gielen	607	45
	<b>56</b>	6,463,328 B1	10/08/02	John	607	45
	<b>57</b>	6,571,123 B2	05/27/03	Ives, et al.	600	544
	<b>58</b>	2003/0073899 A1	04/17/03	Ruohonen, et al.	600	417
	<b>59</b>	6,516,288 B2	02/04/03	Bagne	702	179
	<b>60</b>	6,560,490 B2	05/06/03	Grill, et al.	607	72
	<b>61</b>	6,256,531 B1	07/03/01	Ilmoniemi, et al.	600	544
	<b>62</b>	6,488,617 B1	12/03/02	Katz	600	26

**FOREIGN PATENT DOCUMENTS**

Examiner Initial		Document No.	Date	Country	Translation	
					YES	NO
	<b>63</b>	WO 02/072194 A2	09/19/02	PCT		
	<b>64</b>	WO 01/12236 A2	02/22/01	PCT		
	<b>65</b>	WO 02/31604 A1	04/18/02	PCT		
	<b>66</b>	WO 01/28622 A2	04/26/01	PCT		
	<b>67</b>	WO 00/74777	12/14/00	PCT		

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### U. S. PATENT DOCUMENTS

Examiner Initial		Document No.	Date	Name	Class	Subclass
	68	6,366,814 B1	04/02/02	Boveja, et al.	607	45
	69	6,253,109 B1	06/26/01	Gielen	607	45
	70	6,117,066	09/12/00	Abrams, et al.	600	14
	71	5,707,334	01/13/98	Young	600	9
	72	4,712,558	12/15/87	Kidd, et al.	128	421
	73	6,066,084	05/23/00	Edrich, et al.	600	13
	74	6,567,702 B1	05/20/03	Nekhendzy, et al.	607	46
	75	2002/0013612 A1	01/31/02	Whitehurst	607	45
	76	2002/0169355 A1	11/14/02	Rohan, et al.	600	9
	77	2003/0050527 A1	03/13/03	Fox, et al.	600	13

### FOREIGN PATENT DOCUMENTS

Examiner Initial		Document No.	Date	Country	Translation	
					YES	NO
	78	WO 03/090604 A2	11/06/03	PCT		
	79	WO 03/098268 A1	11/27/03	PCT		
	80	WO 03/084605 A1	10/16/03	PCT		
	81	WO 03/085546 A1	10/16/03	PCT		
	82	WO 03/039468 A2	05/15/03	PCT		

EXAMINER

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	<b>83</b>	6,572,528 B2	06/03/03	Rohan, et al.	600	14
	<b>84</b>	2003/0074032 A1	04/17/03	Gliner, et al.	607	45
	<b>85</b>	2003/0125786 A1	07/03/03	Gliner, et al.	607	116
	<b>86</b>	5,813,970	09/29/98	Abrams, et al.	600	14
	<b>87</b>	5,769,778	06/23/98	Abrams, et al.	600	14
	<b>88</b>	6,169,963 B1	01/02/01	Markov	702	57
	<b>89</b>	2002/0160436 A1	10/31/02	Markov, et al.	435	15
	<b>90</b>	2002/0123780 A1	09/05/02	Grill, et al.	607	72
	<b>91</b>	4,995,395	02/26/91	Ilmoniemi, et al.	128	653
	<b>92</b>	6,537,197 B1	03/25/03	Ruohonen, et al.	600	13

**FOREIGN PATENT DOCUMENTS**

Examiner Initial		Document No.	Date	Country	Translation	
					YES	NO
	<b>93</b>	WO 03/082405 A1	10/09/03	PCT		
	<b>94</b>	WO 2004/006750 A2	01/22/04	PCT		

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	<b>95</b>	6,155,966	12/05/00	Parker	600	13
	<b>96</b>	6,057,373	05/02/00	Fogel	514	740
	<b>97</b>	2003/0087264 A1	05/08/03	Kaplitt, et al.	435	6
	<b>98</b>	2003/0082507 A1	05/01/03	Stypulkowski	434	262
	<b>99</b>	2004/0138550 A1	07/15/04	Hartlep, et al.	600	407
	<b>100</b>	2004/0143300 A1	07/22/04	Rogers	607	45

**FOREIGN PATENT DOCUMENTS**

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					YES	NO

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